

### **Abstract**

- 5 Flow control safeguards are integrated into a blood collection system on a disposable component such as the post-operative surgical drain tube leading from the patient to the collection device. One aspect of the invention prevents suction levels that are too high for the tissue and organs adjacent at the surgical site by providing a vacuum relief valve integrated into the drain tube. In another
- 10 aspect of the invention, reverse flow of fluid back to the patient is prevented by integration of an anti-reflux valve into the surgical drain tubing.